CLAIMS

1. A method for detecting the presence in a sample, contained in a sterile receptacle, of at least one anaerobic microorganism, the sample being in contact with a culture medium, which consists in:
- adding into the receptacle at least one sterile, inert, solid support,
- incubating at a suitable temperature, and
- observing the variation in at least one characteristic related to the presence of the microorganism(s) to be detected in said receptacle.

2. A method for detecting the presence in a sample, contained in a sterile receptacle, of at least one aerobic microorganism, the sample being in contact with a culture medium, which consists in:
- adding into the receptacle at least one sterile, inert, solid support in such a quantity as to obtain a layer of material with a surface area approximately equivalent to that of the interface between the sample and the gaseous atmosphere in the receptacle,
- incubating at a suitable temperature, and
- monitoring the variation in at least one characteristic related to the presence of the microorganism(s) to be detected in said receptacle.

3. A method, according to either of claims 1 or 2, characterized in that the characteristic monitored is due to variation in at least one chemical indicator added into the receptacle before incubation, e.g. a colored or fluorescent indicator, and/or at least one physicochemical or electrical parameter, e.g. CO_2 production, pressure, turbidity,

oxidation/reduction potential and/or pH.

4. A method, according to any of claims 1 through 3, characterized in that the sample is biological in nature, e.g. blood, cerebrospinal fluid, pleural fluid or urine, or non-biological, e.g. water, food products, or pharmaceutical products.

5. A method, according to any of claims 1 through 4, characterized in that variations in the indicator(s) are detected optically through all or part of at least one of the walls (which are transparent) of the receptacle, and/or changes in the parameter(s) are detected by means of physicochemical or electrical sensors.

6. A method, according to any of claims 1 through 5, characterized in that it is applied to anaerobic microorganisms.

7. A Method, according to any of claims 1 through 6, characterized in that it is used in a sterility test.

8. A method according to any of claims 1 through 7, characterized in that the sterile, inert, solid support is made of natural materials, e.g.:

- silica beads,
- small glass beads (solid, hollow or porous),
- quartz particles,
- grains of sand,
- vermiculite, zeolite and/or feldspar particles,
- glass wool and/or rock wool,
- clay beads, and

- cork fragments.

9. A method according to any of claims 1 through 7, characterized in that the sterile, inert, solid support is made of artificial materials, e.g.:
- polystyrene beads,
- polyethylene beads,
- polypropylene beads,
- clusters of small polyethylene beads, with variable pore-size and dimensions,
- growth supports in the form of small beads used in tissue culture,
- latex beads,
- gelatin-coated beads, and
- resin beads.

10. A method according to any of claims 1 through 7, characterized in that the sterile, inert, solid support consists of an element of any shape made of polyethylene.

11. A method, according to either of claims 1 or 2, characterized in that the support consists of beads or particles with a diameter of between 1 µm and 10 mm especially between 0.1 mm and 5 mm.